

Long-standing unreduced dislocation of the knee

A case report

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Summary. *We have successfully treated a middle aged woman with long-standing posterior dislocations of the knee, using two stage external fixation and arthrodesis.*

Résumé. *Les auteurs rapportent un cas exceptionnel de luxation postérieure chronique du genou. Le traitement a été fait en 2 temps opératoires avec*

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réduction progressive par fixation externe puis arthrodesis.

Case report

A 55-year-old woman was admitted to hospital complaining of pain and gross deformity of her right knee. She had considerable disability and was unable to walk.

She had experienced a traumatic and a possible septic process in her knee when she was five years of age. She could not recall full details of the injury and management but the defor-



Fig. 1a, b. Clinical appearance and lateral radiographs showing complete posterior dislocation of the knee

Fig. 2a, b. Clinical appearance and lateral radiograph four months after arthrodesis

mity had persisted since that time. At the age of 40 she suffered an ipsilateral fracture of the femoral shaft; union was obtained with the use of external fixation.

Physical examination revealed a bayonet deformity of the right knee and while walking, the femoral epiphysis rested on soft tissues (Fig. 1a). The knee was completely unstable with a passive range of motion of 15/110°. Neurologically, she had a peroneal nerve palsy and a secondary equinus deformity of the foot.

Radiological investigations showed a complete posterior dislocation of the knee, with limb shortening of 15 centimetres (Fig. 1b).

External fixation was used for a progressive reduction of the deformity. Length correction was obtained after two months, and the arthrodesis was then carried out. At operation there was a unicondylar distal epiphysis of the femur, 45° inclination of the tibial plateau in the anterior-posterior plane, remnants of articular cartilage and the cruciate ligaments, lateral dislocation of both menisci and permanent lateral irreducible dislocation of the patella.

No weight bearing was allowed until the fusion took place, four months after the operation (Fig. 2).

Discussion

Knee dislocation is infrequent and the posterior and lateral types are extremely rare [3, 4, 5, 7, 9]. In particular, no previous report of permanent dislocation of the knee can be found in the literature. In this context Richard [8] reported his experience as a tropical orthopaedic surgeon in Nigeria. Although he had diagnosed and treated long-standing dislocations of many joints, he mentioned that he had never seen a similar injury to the knee. Henshaw [2] described open surgical reconstruction of a posterior knee dislocation, 31 weeks after the initial trauma.

Knee dislocation is usually associated with high energy trauma and may be missed in the presence of multiple injuries. The long-standing dislocation in our patient could be explained by traumatic, septic or

more probably iatrogenic injury of the anterior aspect of the proximal tibial growth plate. Subsequent growth of the posterior aspect resulted in the vertical position of the tibial plateau. In this way, weight bearing could procedure a progressive and complete posterior dislocation of the tibia on the femur.

Arthroplasties and arthrodesis are the conventional modes of treatment of these unusual long-standing injuries. In our patient, we considered arthrodesis to be the most appropriate management by virtue of her age, social and cultural level and the complexity of the knee-damage.

One year after surgery the patient had only slight limitations on her everyday life and she enjoyed a great deal of subjective satisfaction.

References

1. Griswold AS (1951) Irreducible dislocations of the knee joint. *J Bone Joint Surg [Am]* 33:187–191
2. Henshaw MD, Shapiro MS, Oppenheim WL (1996) Delayed reduction of a traumatic knee dislocation. *Clin Orthop* 330:152–205
3. Kennedy JC (1963) Complete dislocation of the knee joint. *J Bone Joint Surg [Am]* 45:889–904
4. Meyers MH, Harvey JP Jr (1971) Traumatic dislocation of the knee joint. *J Bone Joint Surg [Am]* 53:16–29
5. Meyers MH, Moore TM, Harvey JP Jr (1975) Follow-up notes on articles previously published in the journal: traumatic dislocation of the knee joint. *J Bone Joint Surg [Am]* 57:430–433
6. Quinlan AG, Sharard WJW (1958) Posterolateral dislocation of the knee with capsular interposition. *J Bone Joint Surg [Br]* 40:660–663
7. Reckling FW, Peltier LF (1969) Acute knee dislocations and their complications. *J Trauma* 9:181–191
8. Richard DR (1973) Unreduced dislocations. *Trop Doct* 3:119–122
9. Shields L, Mital M, Cave E (1969) Complete dislocation of the knee: experience at Massachusetts General Hospital. *J Trauma* 9:192–215